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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,537	12/29/2005	Duk Hyun Ryu	LEE-0046	8657
23413 7590 11/07/2008 CANTOR COLBURN, LLP 20 Church Street 22nd Floor Hartford, CT 06103				
EXAMINER				
HAN, KWANG S				
ART UNIT		PAPER NUMBER		
1795				
NOTIFICATION DATE		DELIVERY MODE		
11/07/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

# Office Action Summary

**Application No.**

10/563,537

**Applicant(s)**

RYU ET AL.

**Examiner**

Kwang Han

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/ICE)  
Paper No(s)/Mail Date 12/29/05, 02/27/07, 02/06/08
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**SECONDARY BATTERY WITH AN IMPROVED SAFETY**

Examiner: K. Han S.N. 10/563537 Art Unit: 1795 October 28, 2008

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-6 and 8-9 is rejected under 35 U.S.C. 102(e) as being anticipated by Langan et al. (US 6838209).

Regarding claim 1, Langan is directed towards a secondary battery (Column 3, Lines 4-9; lithium-sulfur) comprised of the following:

- a battery package which encloses the outer perimeter of the secondary battery [Abstract], covers the entire outer surface of the positive and negative electrode (Figure 1), and a portion of each terminal (13a, Figure

- 4a) of the positive and negative electrodes (protective polymer layer 15 covering majority of the conductive layer 13),
- the battery package formed of a laminate film (Column 2, Lines 42-51) comprised of,
  - an outer polymer layer (15),
  - an inner aluminum layer (13; Column 2, Lines 65-67),
  - an adhesive layer (11) formed on the portion of the inner surface of the aluminum layer (Figures 3 and 4), and
  - the aluminum layer being electrically connected with the positive and negative terminals (Column 4, Lines 12-14).

Regarding claim 2, Langan discloses the aluminum layer of the battery package and the electrode being connected directly with each other or by an electrically conductive material (Column 3, Lines 34-38).

Regarding claim 3, Langan discloses a method of making a connection between a terminal and the aluminum layer by selectively forming portions of the adhesive layer or the terminal film (protective polymer) (Figures 3, 4a, 4b; Column 4, Line 48-Column 5, Line 1). Whether or not the layer is removed or selectively coated would form the same structure of an expose region.

It is noted that claims 3, 4, 8, and 9 are product-by-process claims. "Even though product-by-process are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is

the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). The battery structure of Langan et al. (US 6838209) is similar to that of the Applicant's, Applicant's process of removing a portion of the layer is not given patentable weight in the claims.

Regarding claim 4, the teachings of Langan as discussed above are herein incorporated. Langan discloses a method of making a connection between a terminal and the aluminum layer by not having a portion of the adhesive layer (11) or the outer polymer layer (15) (Figures 3, 4a, 4b; Column 4, Line 48-Column 5, Line 1). Whether or not the layer is removed or selectively coated would form the same structure of an expose region.

Regarding claim 5, Langan discloses an electrically conductive material including aluminum, copper, and nickel (Column 2, Lines 65-67).

Regarding claim 6, Langan discloses a lithium secondary battery (Column 3, Lines 4-9; lithium-sulfur).

Regarding claims 8 and 9, the applicant is directed towards the discussion concerning claims 1-3.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 7, 10-14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langan et al. as applied to claim 1 above, and further in view of Yageta et al. (US 2002/0146621).

Regarding claim 7, the teachings of Lagan as disclosed above are herein incorporated. Lagan is silent as to having an electrically conductive foil on the outer upper or lower surfaces of the battery package.

Yageta et al. teaches a battery which uses a metal thin film layer (comprised of metals which are electrically conductive [Al, Sn, Cu, Ni, stainless steel]) as the external layer of the case for the benefit of acting as a gas barrier film [0085].

It would have been obvious to one of ordinary skill at the time of the invention to use a metal foil on the outer surface of the battery casing of Langan which would create an electrical connection with the terminal for the benefit of acting as a gas barrier film as taught by Yageta.

Regarding claims 10 and 15, the applicant is directed towards the discussion concerning claims 1 and 7 above.

Regarding claims 11 and 12, the teachings of Lagan and Yageta are herein incorporated.

It is well known to one of ordinary skill in the art that the metal foil metals of Yageta (Al, Sn, Cu, Ni, Stainless steel) are electrically conductive and thermally conductive.

The courts have held that claiming of a property or characteristic which is inherently present in the prior art does not necessarily make the claim patentable. In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). See MPEP 2112 and 2112.01. When the Examiner has provided a sound bases for believing that the products of the applicant and the prior art are the same, the burden of proof is shifted to the applicant to prove that the product shown in the prior art does not possess the characteristics of the claimed product. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Regarding claim 13, the teachings of Lagan and Yageta as discussed above are herein incorporated. Lagan further discloses a nonconductive separator (7; Column 3, Lines 43-51) placed between the outer layers of the battery packaging.

Regarding claim 14, the teachings of Langan and Yageta as discussed above are herein incorporated. Langan discloses a lithium secondary battery as discussed for claim 6 above.

***Contact/Correspondence Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwang Han whose telephone number is (571) 270-5264. The examiner can normally be reached on Monday through Friday 8:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on (571) 272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. H./  
Examiner, Art Unit 1795

/Dah-Wei D. Yuan/  
Supervisory Patent Examiner, Art Unit 1795